INTRODUCTION
Depression is a major health problem. It impairs psychosocial and occupational functioning, and is associated with significant morbidity and mortality. In the 1990 Global Burden of Disease Study, depression was the fourth leading cause of disability in terms of physical, social and mental impact of disease. It is predicted that depression will become the second most important cause of disability worldwide by the year 2020.

Epidemiological studies have revealed a high prevalence of depression in many communities in the world; international surveys report that 9%–20% of the population may be affected during their lifetime. In Singapore, the prevalence of depression was estimated (in 1998) to be 8.6% in adults and 5.7% in the elderly. Nation-wide epidemiological surveys done in 2003/4 revealed that the prevalence of depression was 4.9% in adults and 3.1% in elderly populations. The 2010 Singapore National Mental Health Survey reported that the lifetime prevalence of depression in Singapore adults was 6.3%.

Depression is a recurrent disorder. Each additional depressive episode increases the probability of subsequent episodes with a more rapid onset. The estimated risk of recurrence is 50%, 80%–90% and > 90% after one, two and three episodes, respectively. In addition, co-morbidity is an important clinical finding in depression and is associated with increased disease severity and a poorer prognosis. Depression can co-exist with many medical conditions such as cancers (25%–38%), diabetes mellitus (24%), coronary artery disease (16%–19%), other psychiatric disorders, and may even be associated with medication use (see Annex I on pg 56). A local study of depression in diabetes mellitus revealed that 31% of diabetes sufferers in a specialist outpatient clinic also had depression.

The most serious complication of depression is suicide. The lifetime risk of suicide in mood disorders has been estimated to be 10%–15%, and the risk of attempted suicide is increased 41-fold in depressed patients compared with those with other diagnoses. A recent review of suicides in Asia suggested that improving the accessibility and delivery of mental health services, and promoting responsible media reporting of suicide are key initiatives in the efforts to reduce suicides in all communities.

Unfortunately, under-recognition and under-treatment of depression are serious clinical issues requiring our attention. The 2003/4 epidemiological surveys in Singapore showed that only about 50% of individuals found to have depression were receiving any kind of treatment for their problem. It has also been estimated that 30%–50% of cases of depression in primary care and medical settings are not detected. This is because a depressed mood may not necessarily be the presenting symptom. Instead, multiple somatic complaints, co-existing medical or psychiatric illness, stressors and life-events may obscure the depression. A high index of suspicion and alertness is therefore crucial for recognition and diagnosis.

Aim
These guidelines are developed to raise awareness and assist in the detection of depression, and to ensure that treatment of depression is appropriate and effective.
Scope
These guidelines will cover the management of depression in children, adults, the elderly, and depression in pregnancy. Management of depression in bipolar disorder, psychotic depression and cases with high suicide risk are not included in these guidelines.

Target group
The content of the guidelines will be useful for all doctors treating patients with depression, and is a resource for allied health and nursing staff who assist in the care of depressed people. Efforts have been made to ensure that the guidelines are particularly useful for primary care physicians (family practitioners) who have an important role in the management of mild to moderate and stable mental health disorders in the community. The doctor treating the patient is ultimately responsible for the treatment decisions, which should be made after reviewing the patient’s history, clinical presentation and the treatment options available.

Development of guidelines
These guidelines have been produced by a committee of psychiatrists, clinical psychologists, pharmacists, medical social worker, patient representative and a family practitioner appointed by the Ministry of Health. They were developed by the adaptation of existing guidelines, by the review of relevant literature and by expert clinical consensus with consideration of local practice. The following principles underlie the development of these guidelines:

• Treatment recommendations are supported by scientific evidence, whenever possible (randomised controlled clinical trials represent the highest level of evidence), and expert clinical consensus is used when such data are lacking.
• Treatment should maximise therapeutic benefits and minimise side effects.

What’s new in the revised guidelines
This edition of the guidelines contains updated recommendations based on latest evidence, as well as detailed discussions and recommendations on the management of depression in the following populations:

• Children and adolescents
• Pregnant women
• The elderly

Review of guidelines
Evidence-based clinical practice guidelines are only as current as the evidence that supports them. Users must keep in mind that new evidence could supersede recommendations in these guidelines. The workgroup advises that these guidelines be scheduled for review five years after publication, or when new evidence appears that requires substantive changes to the recommendations.

EXECUTIVE SUMMARY OF RECOMMENDATIONS
Details of the recommendations listed can be found in the main text as the pages indicated.

Clinical evaluation

D The basic assessment of depression includes the history, the mental state examination and physical examination.

• Take a detailed history of the presenting symptoms and determine the severity and duration of the depressive episode. Establish history of prior episodes, prior manic or hypomanic episodes, substance abuse and other psychiatric illnesses. Look out for co-existing medical conditions. Check for family history of mental illness, depression and suicide. Establish the personal history and available supports and resources. Evaluate functional impairment and determine life events and stressors.
• Do a mental state examination. This includes an evaluation of the severity of symptoms and assessment for psychotic symptoms. All assessments of depression will include an assessment of the risk of suicide, self-harm and risk of harm to others. (See Annex II on pg 58).
• Do a physical examination to exclude a medical or surgical condition.
• Laboratory testing may be indicated if there is a need to rule out medical conditions that may cause similar symptoms (pg 20).

Grade D, Level 4

D Screening for depression may be beneficial when it is done in high-risk populations (such as individuals with significant physical illnesses causing disability) where the benefits outweigh the risks (pg 21).

Grade D, Level 4

C The PHQ-9 (patient health questionnaire 9) may be used to screen for depression in primary care (pg 21).

Grade C, Level 2+

D Referrals to a specialist are warranted when:

• There are co-morbid medical conditions for which expertise is required regarding drug-drug interaction.
• There is diagnostic difficulty.
• One or two trials of medication have failed.
• Augmentation or combination therapy is needed.
• There are co-morbid substance abuse or severe psychosocial problems.
• Psychotic symptoms are present.
• Specialised treatment like electroconvulsive therapy is indicated (pg 22).

Grade D, Level 4
Principles of treatment

**GPP** Consider using the Clinical Global Impression scales (both severity and improvement component scales) to measure illness severity and treatment progress during consultations (pg 25).

**GPP**

**Pharmacotherapy**

**A** Antidepressants should be recommended as a first-line treatment in patients with moderate to severe depression, or sub-threshold depression that has persisted for two years or more (pg 26).

**Grade A, Level 1+**

**D** Antidepressants are a treatment option in short duration mild depression in adults and should be considered if there is a history of moderate to severe recurrent depression, or if the depression persists for more than 2–3 months (pg 26).

**Grade D, Level 4**

**D** If the patient has previously responded well to and has had minimal side effects with a drug, that drug is preferred. Alternatively, if the patient has previously failed to respond to an adequate trial of one antidepressant or found the side effects of an antidepressant intolerable, that medication should generally be avoided (pg 27).

**Grade D, Level 4**

**A** Once an antidepressant has been selected, start with a low dose and titrate gradually to the full therapeutic dose while assessing patients’ mental state and watching for side effects. The frequency of monitoring depends on the severity of the depression, suicide risk, the patient’s cooperation and the availability of social support (pg 27).

**Grade A, Level 1+**

**A** A selective serotonin reuptake inhibitor antidepressant should be used as a first-line medication for treating depression, due to its favourable risk-benefit ratio, greater tolerability and safety in overdose (pg 28).

**Grade A, Level 1++**

**A** A selective serotonin reuptake inhibitor antidepressant should be prescribed as a first-line medication for depression in patients with concomitant cardiovascular diseases due to their favourable risk-benefit ratio (pg 28).

**Grade A, Level 1++**

**A** The ‘newer’ antidepressants can also be considered as other first-line options for treating depression. They include:
- Serotonin and norepinephrine reuptake inhibitors (e.g. venlafaxine)
- Noradrenergic and specific serotonergic antidepressants (e.g. mirtazapine)
- Norepinephrine and dopamine reuptake inhibitors (e.g. bupropion) (pg 28).

**Grade A, Level 1+**

**D** Where there are interactions with other drugs, use of escitalopram or sertraline should be considered as they have fewer propensities for interactions, appear to be safe and possibly protective of further cardiac events (pg 28).

**Grade D, Level 4**

**A** Due to their cardiotoxic adverse effect risks, tricyclic antidepressants should be avoided in patients at high risk of cardiovascular disease, arrhythmias and cardiac failure (pg 29).

**Grade A, Level 1++**

**A** Older tricyclic antidepressants and monoamine oxidase inhibitors (MAOIs) should be reserved for situations when first-line medication treatment has failed (pg 29).

**Grade A, Level 1++**

**B** A new class of antidepressants, known as melatonergic agonists, e.g. agomelatine, may also be considered as an alternative treatment option for depression, if first-line medication is unsuitable or has failed (pg 29).

**Grade B, Level 1+**

**D** When an antidepressant is to be prescribed, tailor it to the patient with depression and a chronic physical health problem, and take into account the following:
- Presence of additional physical health disorders.
- Side effects of antidepressants, which may impact the underlying physical disease (in particular, selective serotonin reuptake inhibitors may result in or exacerbate hyponatraemia, especially in older people.
- Interactions with other medications (pg 29).

**Grade D, Level 3**

**C** Emergence of suicidal thinking and behaviour or unusual changes in behaviour should be monitored during the early phases (generally the first 1–2 months) of antidepressant treatment, especially in children, adolescents and young adults between 18 to 24 years old.

**Grade C, Level 2+**

**A** Initial and short-term (2–4 week) usage of a benzodiazepine together with an antidepressant may be considered where anxiety, agitation and/or insomnia becomes problematic to patients with depression (pg 30).

**Grade A, Level 1++**
All antidepressants, once started, should be continued for at least 4–6 weeks (pg 30).

**Grade C, Level 2+**

Patients with a first episode of depression without psychotic symptoms should be treated with antidepressants at full treatment dose for 6–9 months after remission of symptoms (pg 30).

**Grade A, Level 1++**

Patients who have a second episode of depression should be maintained on treatment for 1–2 years; the duration may depend on the risk factors for recurrence and patient preference (pg 31).

**Grade B, Level 1+**

Patients with more than two episodes of depression should be maintained on treatment for two years or longer, or even lifelong; the duration may depend on the risk factors for recurrence and patient preference (pg 31).

**Grade C, Level 2+**

**GPP** Maintenance antidepressant treatment should be carried on for as long as necessary (pg 31).

**GPP**

Using higher antidepressant doses may be helpful for patients who have shown a partial response and when only low or modest doses have been tried. The patient should be closely monitored for side effects with the increase in dose (pg 32).

**Grade B, Level 2++**

Both switching within the class (i.e. from a selective serotonin reuptake inhibitor to another), as well as switching from a selective serotonin reuptake inhibitor to a different class of antidepressants, may be done, as both have been found to be beneficial (pg 32).

**Grade A, Level 1++**

**GPP** When switching medications, clinicians should be vigilant for the onset of drug-drug interactions (e.g. serotonin syndrome) and drug discontinuation reaction (pg 32).

**GPP**

Lithium augmentation and thyroid hormone augmentation (using levothyroxine or triiodothyromine) are two traditional augmentation strategies that may be used for patients who have had previous antidepressant trials and have not responded to adequate trials of other individually prescribed antidepressants (pg 33).

**Grade A, Level 1++**

When discontinuing antidepressants, they should be gradually tapered off instead of stopped suddenly in order to reduce the side effects of discontinuation (pg 33).

**Grade A, Level 1++**

**Psychotherapy**

**A** Psychotherapy alone is as efficacious as antidepressant medication in patients with mild to moderate major depression and may be used as first-line treatment (pg 34).

**Grade A, Level 1++**

**A** Cognitive-behavioural therapy is recommended when the depressed patient has distorted negative thoughts (pg 35).

**Grade A, Level 1++**

**B** Cognitive-behavioural therapy is also an effective maintenance treatment and is recommended for patients with recurrent depression who are no longer on medication (pg 35).

**Grade B, Level 1+**

**Interpersonal therapy**

**B** Interpersonal therapy is recommended for depressed patients with interpersonal difficulties (pg 35).

**Grade B, Level 1+**

**A** Psychodynamic-interpersonal therapy is a viable alternative treatment for depressed patients with interpersonal difficulties (pg 36).

**Grade A, Level 1+**

**A** Long-term psychodynamic psychotherapy is recommended for depressed patients with co-morbid personality disorder (pg 36).

**Grade A, Level 1++**

**A** Problem-solving therapy is recommended for primary care patients with mild depression (pg 36).

**Grade A, Level 1++**

**A** Cognitive-behavioural therapy or psychodynamic interpersonal therapy should be delivered for a longer period (i.e. 16 weeks or longer) when the depression is severe (pg 37).

**Grade A, Level 1+**

**D** If a moderate improvement, at least, is not observed after 4–8 weeks of psychotherapy, a thorough review of the diagnosis, complicating conditions and issues, and treatment plan should be conducted. If there is no response, consider adding or changing to medication. If there is partial response, consider changing the intensity of
psychotherapy, changing the type of psychotherapy or adding or changing to medication (pg 37).

**Grade D, Level 4**

**Psychoeducation and family intervention**

**A** The following should be done:

(a) Educating the patient about the illness helps clarify uncertainty and misconceptions. Depression should be explained as a medical illness that is associated with changes in neurochemicals and brain functioning.

(b) Adequate follow-up improves treatment adherence, and allows closer monitoring and earlier detection of changes in condition.

(c) Discuss the type and duration of treatment. If antidepressants are used, it is advisable to explain that they are not addictive. Provide information on the different types of antidepressants available and about the possible side effects.

(d) Advise on lifestyle changes such as exercise and reducing stress (pg 38).

**Grade A, Level 1++**

**GPP** Where indicated and with patients’ agreement, involve family members or friends in the care of people with depression so that there is adequate support (pg 38).

**A** Marital or couple therapy is effective and should be considered for patients with significant marital distress (pg 38).

**Grade A, Level 1+**

**Electroconvulsive therapy**

**A** Electroconvulsive therapy is an effective short-term treatment for major depressive disorder and should be considered in patients who have not responded to antidepressant therapy (pg 41).

**Grade A, Level 1++**

**A** Patients should be maintained on antidepressants following successful response to electroconvulsive therapy (pg 41).

**Grade A, Level 1+**

**D** Electroconvulsive therapy may be considered as a first-line treatment for severely depressed patients with severe psychomotor retardation (associated with food refusal leading to nutritional compromise and dehydration), active suicidality and psychotic features (pg 41).

**Grade D, Level 3**

**D** Electroconvulsive therapy may also be considered in situations when a particularly rapid antidepressant response is required, such as in pregnancy and in those with co-morbid medical conditions that preclude the use of antidepressant medications (pg 42).

**Grade D, Level 3**

**Psychoeducation and family intervention**

**D** Self-administered rating scales (or questionnaires) should not be used for diagnosis, but may be used for screening of symptoms, assessing severity and monitoring improvement in older children and adolescents (pg 43).

**Grade D, Level 4**

**D** When faced with a suicidal adolescent, doctors should maintain contact, ensure close supervision and engage support systems such as family and school, and consider a ‘no harm’ contract if the adolescent is willing (pg 44).

**Grade D, Level 4**

**D** Hospitalisation is indicated if suicide risk is high, support is unavailable and there are severe symptoms of depression (pg 44).

**Grade D, Level 4**

**A** Psychosocial interventions are recommended on initial treatment of depression in children and adolescents based on the literature and local clinical experience (pg 44).

**Grade A, Level 1++**

**D** Medication should not be the only treatment given to children and adolescents with depression, but care should be given to increasing self-esteem, coping skills to handle stress, adapting to the changes in life and improving relationships between family members and peers. Use of medications should be cautious and not necessarily first-line treatment for major depressive disorder (pg 45).

**Grade D, Level 3**

**D** Medications are usually indicated for children and adolescents with severe depression, who have psychotic symptoms or who have failed psychotherapy (pg 45).

**Grade D, Level 4**

**C** Selective serotonin reuptake inhibitors should be used with caution in children and adolescents (pg 45).

**Grade C, Level 2+**

**A** A combination of psychosocial interventions and selective serotonin reuptake inhibitors may be considered for moderate to severe depression in children and adolescents (pg 45).

**Grade A, Level 1++**
Other antidepressants such as venlafaxine may be considered as a second-line treatment of depression in children and adolescents (pg 46).

**Grade A, Level 1++**

**GPP** Referral of a child or adolescent with depression to a psychiatrist could be considered in any of the following situations:

- Failure to improve with psychosocial interventions, or requiring specialised psychological interventions.
- Failure to improve after at least four weeks of medication treatment at maximum tolerated dose.
- Severe symptoms such as clear suicidal intention or disruptive psychotic symptoms (pg 46).

**Depression in pregnancy**

Consider using these two questions to effectively identify possible depression in pregnant and postpartum women:

1. “During the past month, have you often been bothered by feeling down, depressed or hopeless?”
2. “During the past month, have you often been bothered by having little interest or pleasure in doing things?”

If the woman answers “yes” to either question, consider asking this: “Is this something you feel you need or want help with?” (pg 47, 48).

**Grade C, Level 2+**

It is strongly recommended that specialist psychiatric care be arranged for pregnant or postpartum women with:

- Past or present severe mental illness, including schizophrenia, bipolar disorder, psychosis in the postnatal period and severe depression.
- Previous treatment by a psychiatrist/specialist mental health team, including inpatient care.
- A family history of maternal perinatal mental illness (pg 48).

**Grade D, Level 4**

Psychological therapies (including non-directive counselling and support) should be maximised as the first-line treatment strategy for peripartum depression, and medication should be considered only in severe depression (pg 48).

**Grade D, Level 4**

Early referral to a specialist with expertise in perinatal mental health is recommended for women with peripartum depression and pre-existing depressive illness (pg 49).

**Grade D, Level 4**

**Depression in the elderly**

Early referral to a psychiatrist with expertise in perinatal mental health is recommended for elderly patients with new-onset peripartum depression, unless it is mild (pg 48).

**Grade D, Level 4**

Antidepressants are recommended in dysthymia as well as for mild to severe depression in the elderly. There is no difference in efficacy between the classes of antidepressants in the treatment of the elderly (pg 50).

**Grade A, Level 1++**

Selective serotonin reuptake inhibitors are recommended over tricyclic antidepressants as the first-line treatment choice for late-life depression (pg 51).

**Grade A, Level 1++**

In frail elderly patients, it is advisable to ‘start low, go slow’. In the acute phase, at least six weeks of treatment may be needed to achieve optimal therapeutic effect (pg 51).

**Grade B, Level 1+**

For frail elderly patients, a continuation period on the same dosage that improved them for 12 months is recommended for a first onset of major depression, longer for a recurrent episode. The duration of treatment is similar to that of the adult age group in the continuation and maintenance phases (pg 51).

**Grade B, Level 1+**

Psychological interventions should be provided for the elderly with mild to moderate major depression (pg 51).

**Grade B, Level 1+**
In severe major depression in the elderly, combination antidepressant and psychotherapy treatment is recommended (pg 51).

**Grade B, Level 1+**

Supportive care should be offered to elderly patients and where relevant, their caregivers (pg 52).

**Grade B, Level 1+**

Electroconvulsive therapy is indicated in the elderly:
- When the patient is actively suicidal.
- When there is an urgent need to prevent deterioration in health (including food/fluid refusal).
- In psychotic depression.
- When there is inadequate response to two trials of medication.
- When there is intolerance to medication.
- When there is good prior response (pg 52).

**Grade B, Level 1+**
SINGAPORE MEDICAL COUNCIL CATEGORY 3B CME PROGRAMME
(Code SMJ 201202C)

These questions are based on the full text of the guidelines, which may be found at http://www.moh.gov.sg/content/moh_web/home/Publications/guidelines/cpg/2012/depression.html

Question 1. For depression in the elderly:
(a) Organic causes are more frequent.
(b) Subjective complaints of memory problem are less common.
(c) Selective serotonin reuptake inhibitors are recommended as first-line treatment.
(d) It generally takes longer to respond to antidepressant treatment.

Question 2. Evaluate these statements on peripartum depression:
(a) Psychological therapy is the mainstay of treatment.
(b) Medication is recommended for all patients.
(c) Withdrawal of antidepressants is recommended for depressed patients who get pregnant, as the risk of relapse is low.
(d) Family history and personal history of depression are both important risk factors for postnatal depression.

Question 3. The following treatment can contribute to a reduction in depressive symptomatology for depressed patients who are married or have couple relational difficulties:
(a) Couple crisis intervention.
(b) Couple/marital therapy.
(c) Group work for couples.
(d) Psychoeducation in couple lifestyle change.

Question 4. The following are useful in relieving anxiety, enhancing compliance and assisting recovery:
(a) Educating the patient about the illness helps clarify uncertainty and misconceptions.
(b) Adequate follow-up improves treatment adherence, allows closer monitoring and earlier detection of changes in condition.
(c) Discuss the type and duration of treatment. If antidepressants are used, it is advisable to explain that they are not addictive. Provide information on the different types of antidepressants available and about the possible side effects.
(d) Advise on lifestyle changes such as exercise and reducing stress.

Question 5. Regarding tricyclic antidepressants:
(a) They are still the first-line treatment for major depressive disorder.
(b) They should be avoided in patients at increased risk of cardiovascular disease, arrhythmias and cardiac failure.
(c) They should be the antidepressant class of choice when there is presence of interactions with other medications.
(d) Their usage is not favoured over selective serotonin reuptake inhibitors due to their unfavourable risk-to-benefit ratio.

Doctor’s particulars:
Name in full : ____________________________________________________________ Specialty: ________________________________________________
MCR number : __________________________________________________________
Email address : ________________________________________________________

SUBMISSION INSTRUCTIONS:
(1) Log on at the SMJ website: http://www.sma.org.sg/cme/smj and select the appropriate set of questions. (2) Select your answers and provide your name, email address and MCR number. Click on “Submit answers” to submit.

RESULTS:
(1) Answers will be published in the SMJ April 2012 issue. (2) The MCR numbers of successful candidates will be posted online at www.sma.org.sg/cme/smj by 19 March 2012. (3) All online submissions will receive an automatic email acknowledgment. (4) Passing mark is 60%. No mark will be deducted for incorrect answers. (5) The SMJ editorial office will submit the list of successful candidates to the Singapore Medical Council. (6) One CME point is awarded for successful candidates.

Deadline for submission: (February 2012 SMJ 3B CME programme): 12 noon, 12 March 2012.

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